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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,396	01/13/2006	Jae-Hoon Tae	31656-227294	1487
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VENABLE LLP P.O. BOX 34385 WASHINGTON, DC 20043-9998			EXAMINER LEE, BENNY T	
			ART UNIT 2817	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/564,396

Applicant(s)

TAE ET AL.

Examiner

Benny Lee

Art Unit

2817

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 7, 8, 18-23 is/are allowed.
- 6) ☒ Claim(s) 2-6, 9, 10, 13, 17, 24 is/are rejected.
- 7) ☒ Claim(s) 11, 12, 14-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

The disclosure is objected to because of the following informalities: In the replacement paragraph to page 3, lines 8-11, last two lines therein, note that --(i.e. 1<0)-- should be inserted after "1" and --(i.e. 2<0)-- should be inserted after "2", respectively for consistency with the labeling in FIG. 1. Page 10, note that the reference to "first induction unit 13" and "second induction unit 14" are respectively vague in meaning and need clarification. That is to say, the specification needs to define what characterizes an "induction unit". Clarification is needed. Appropriate correction is required.

The disclosure is objected to because of the following informalities: Note that the following reference labels need to be described with respect to the corresponding drawing figures specification description: Fig. 2 (P3/_03). Appropriate correction is required.

The amendment filed 25 February 2008 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: In the replacement paragraph to page 8, lines 7-10, for the "dielectric 20", the deletion of "Teflon" as the material of the dielectric appears to provide a broader description than what was originally disclosed and thus has been treated as "new matter" (i.e. the original specification appears to disclose that "Teflon" was the intended material for dielectric 20).

Applicant is required to cancel the new matter in response to this Office action.

Claims 2-6, 9 are rejected under 35 U.S.C. 112, first paragraph, as the specification does not contain a written description of the claimed invention, in that the disclosure does not

reasonably convey to one skilled in the art that the inventor(s) has possession of the claimed invention at the time the application was filed.

In claim 2, note that the change from the originally recited “copper plate” to the more broader recitation of just “plate” does not appear supported by the original application and thus has been treated as “new matter”. That is to say, the original disclosure does not appear to provide support for the “plate” being of any material other than “copper”.

However, if applicant does not believe the above issues are “new matter”, then an appropriate explanation is required including pointing out where support for the limitation(s) in question can be explicitly found in the original specification.

Claims 2-6, 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2, 4, note that reference to a “first induction unit” and a “second induction unit” are respectively vague in meaning as to what characterizes such “induction units”. That is to say, a definition of what characterizes “induction units” needs to be provided Clarification is needed. Moreover, note that the recitation of “on the same plane as said input port” (i.e. claims 2, 4) and “on the same plane as said phase shift means” (i.e. claim 2) are respectively vague in meaning since these features have not yet been defined as being on any “plane”. Clarification is needed.

In claim 5, note that reference to “the dielectric” lacks strict antecedent basis.

In claim 6, note that the recitation “on the same plane” is vague in meaning since no “plane” has been defined for the feature in question. Clarification is needed.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by the Takashi et al reference (of record).

Regarding claim 10, the Takashi et al reference discloses a power dividing means (e.g. at the far left side of the Fig. 1 structure) which receives an input signal at an input port and splits the input signal into first and second output signals. Note that the second output signal is of a fixed phase value, which is outputted at a corresponding output port. Note that the first output signal from the dividing means is further split into third and fourth divided signals (i.e. at the upper junction of the dividing means). Note that each one of the third and fourth signals are fed into corresponding phase shifters (e.g. 3B, 4B) and includes a phase shift of the signals which is dependent on the path length (i.e. by virtue of the position of the respective wiper arm in the corresponding phase shifter (e.g. 3B, 4B).

Claims 13, 17 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by the Zimmerman et al reference (of record).

Zimmerman et al discloses a phase shifter comprising: a phase shift unit having a pivot point (i.e. wiper arm 12) and a feed point (i.e. the far end of conductive strip 7) for inherently receiving an RF signal and a phase delay unit of an arc shape comb (i.e. arc shape conductive strips 8, 9) which divide the input RF signal into two RF signal paths whose electrical length is dependent on the position of the wiper arm (12). Note that as known to those of ordinary skill in

the art, the amount of path length affects the amount of phase shift or delay. Moreover, note that a thin insulating film is disposed between the pivotable phase shift unit (i.e. wiper arm 12) and the arc shape phase delay units (i.e. 8, 9).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takashi et al in view of Phillips et al (both of record).

With regard to claim 24, note that Takashi et al discloses the claimed invention except for the second divided signal being electromagnetically transferred or coupled to an output port.

Phillips et al discloses a phase shifter wiper arm, which is configured with respect to a dividing means. Note in particular, the wiper arm provides for capacitive coupling (i.e. a form of electromagnetic coupling) to corresponding output ports, as evident from FIG. 2.

Accordingly, it would have been obvious in view of the references, taken as a whole, to have modified the coupling in the Takashi et al phase shifter arrangement to have been a

capacitive (i.e. electromagnetic) coupling with respect to the output ports, such as taught by Phillips et al. Such a modification would have been considered an obvious substitution of art recognized equivalent components from references in the same field of endeavor (i.e. phase shifters with wiper arms) and as such would have suggested the obviousness of such a modification.

Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new grounds of rejection.

Claims 2-6, 9 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112 set forth in this Office action.

Claims 11, 12; 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

Claims 1, 7, 8; 18-23 are allowable over the prior art of record.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.

**/BENNY LEE/
PRIMARY EXAMINER
ART UNIT 2817**

B. Lee